

Remarks

In the Office action mailed September 22, 2004, Applicants' claims 1-45 and 63-80 were objected to because of informalities. See 2nd Office action, 2. Claims 1-17, 38, 40-55, 58, 60-71, 74, and 76-80 were rejected under § 103(a) as being unpatentable over Nemirofsky et al. (U.S. Pat. No. 5,412,416). See id. at 9. Claims 20, 39, 59, and 75 were rejected under § 103(a) as being unpatentable over Nemirofsky et al. in view of Martinez (U.S. Pat. No. 4,928,177), in further view of Richer et al. (U.S. Pat. No. 4,956,709). See id. at 16. Claim 46 remains rejected under 35 U.S.C. § 103(a) as being unpatentable over Esch et al. (U.S. Pat. No. 5,099,319). See id. at 3. Claims 47-58, 60-74, and 76-80 remain rejected under § 103(a) as being unpatentable over Esch et al. in view of Martinez. See id. at 6. Claims 59 and 75 remain rejected under § 103(a) as being unpatentable over Esch et al. in view of Martinez, in further view of Richer et al. See id. at 9. Each of these objections and rejections is discussed below.

Objections

Claims 1, 26, and 63 were objected to due to informalities in these claims. See id. at 2. Specifically, the Office action stated that: in claim 1, line 4 (line references cited in the second Office action refer to the claims in the Applicants' response to the first Office action), the word "segment" should follow media; both occurrences of "signals" in claim 1, line 13 should be singular; in claim 1, line 15, "signals" should be singular; claim 26, line 14, the word "tire" should be "the"; and claim 63, line 7, the word "arc" should be "are." See id. Applicants have made these changes in the claims. Applicants further note that with the exception of "signals" in claim 1, line 13, each of these informalities was not in the claim as

originally presented and were due to typographical errors in the response to the first Office action and were not intended to be amendments to the claims. Applicants have submitted formal amendments in this response to correct these errors. Applicants believe the application's claims now comply with formal requirements.

§ 103(a) Rejections

All of Applicants' claims were rejected in the Office action under § 103(a) as being unpatentable over cited references, chiefly Nemirofsky and Esch et al. See id. Applicants will show below that none of these claims is obvious because the limitations of these claims are neither taught nor suggested by the individual references, a combination of the references, or by a combination of the cited reference(s) and knowledge that is generally available to one of ordinary skill in the art. See MPEP § 2143.

Claims 1-25

Applicants' amended claim 1 teaches a system for frame accurate insertion of a media segment into a broadcast signal where a central insertion control unit inserts a control signal related to the media segment into the broadcast signal after confirmation is received that the media segment was transferred to and stored at a remote station. See amended claim 1; see Application at 13. Applicants assert that this claim is not obvious because all of the limitations of this claim are neither taught nor suggested by Nemirofsky alone or in combination with knowledge generally available to one of ordinary skill in the art. See MPEP § 2143.

Nemirofsky teaches a system for distribution and broadcast of a customized video program from a distribution center to various receiving sites. See Nemirofsky, col. 2, ln. 7-10. A central site distributes network-wide video program and market-specific segments to a plurality of

receiving sites. See id., col. 2, ln. 33-38. Each of the market-specific segments includes a destination address and control data. See id., col. 2, ln. 38-40. When the market-specific segment with a destination address arrives at a receiving site whose address matches the destination address in the control data associated with the market-specific segment, a switch occurs and the market-specific segments, rather than the network-wide video program, are displayed at the receiving site. See id. The market-specific segments, as well as the network-wide video, are encoded with switching commands and other control data before distribution to the receiving site. See id., col. 3, ln. 28-33. According to Nemirofsky, "The control data precedes the market specific segment to which it is assigned, permitting the data to be read by the insertion control unit, which then directs the receiver to retune or switch to the appropriate channel if the switching command so instructs." Id., col. 3, ln. 33-38. Information other than switching commands may be included in the control data. See id., col. 9, ln. 21-24. For instance, the information may include program/segment storage commands. See id., col. 9, ln. 24-26. A program/segment storage command directs the processor to generate a storage command so that the following market-specific segments or portions of the network-wide program may be stored and recalled. See id., col. 9, ln. 29-43. The control data including these commands still precedes the relevant market-specific segment or network-wide program. See id., col. 9, ln. 21-28 (". . . [T]he control data carried with the network-wide program 20 and market-specific segments may include various types of information . . . [such as] program/segment storage commands." Id. Emphasis added.).

In contrast to Nemirofsky, Applicants' amended claim 1 specifically teaches that the media segment to be inserted is confirmed as transferred and stored at a remote station before the control signal, comprising a cue signal and an

action signal triggering insertion of the media segment into the broadcast signal, is inserted into the broadcast signal by the central insertion control unit. See amended claim 1; see Application at 13, 16. There are at least three differences between Nemirofsky and Applicants' claimed invention: 1) Nemirofsky does not require confirmation that the market-specific segment has been transferred and stored at the remote site before control data relating to the market-specific segment is sent to the remote site; 2) Nemirofsky requires control data to precede the market-specific segment while Applicants teach that the control signal is sent only after confirmation has been received that the media segment has been transferred to and stored at the remote site; and 3) Nemirofsky teaches sending a market-specific segment preceded by control data and a destination address while Applicants teach sending the media segment separately from the control signal. Each of these differences demonstrates that Nemirofsky teaches away from Applicants' claimed invention, and each of these differences is sufficient to show Applicants' claim is not obvious. Therefore, since Nemirofsky neither teaches nor suggests any of these limitations of Applicants' claim 1, claim 1 is not obvious.

Applicants' amended claim 1 is also not obvious since there is no suggestion to modify Nemirofsky's teachings to first transmit the market-specific segment to the receiving site, confirm the transfer, and then send a signal calling for the market-specific segment to be played since such a modification would change Nemirofsky's principle of operation. See MPEP § 2143.01. Nemirofsky specifically teaches encoding control data into market-specific segments and network-wide programs and having the control data precede the market-specific data to which it is assigned so the receiver can respond accordingly. See id., col. 3, ln. 28-38. Therefore, Nemirofsky's principle of operation is to encode control data immediately preceding the market-specific segment or network-

wide program segment sent to the receiving unit so that the receiving unit can process the market-specific segment and/or network-wide program accordingly. Modifying Nemirofsky's approach to resemble Applicants' approach, i.e., first transmitting the market-specific segment to the receiving site, confirming the transfer, and then sending a signal calling for the market-specific segment to be played, would require a substantial redesign and reconstruction of Nemirofsky's teachings on encoding signals, specifically, changing when market-specific segments should be sent, adding a new step by requiring the confirmation of the transfer of the market-specific segments to the receiving unit, and when control data signals should be encoded and altering where they should appear in the signal being sent to the receiving unit. Where a substantial redesign or reconstruction of a reference's teachings is required, there is no suggestion to modify that reference to produce Applicants' claimed invention, and the claimed invention is not obvious. See In re Ratti, 270 F.2d 810, 813 (C.C.P.A. 1959); see MPEP § 2143.01.

Applicants' claims 2-25 are dependent claims of independent claim 1. As shown above, claim 1 is not obvious. Therefore, the claim's dependent claims are also not obvious for at least the same reasons as stated above for claim 1.

Claims 26-45

Applicants' amended claim 26 teaches a central insertion control apparatus for frame accurate insertion of a media segment into a broadcast signal. See Application, amended claim 26. Among the elements comprising the central insertion control apparatus is an encoder for encoding control signals related to the media segment and information signals into a broadcast; the control signal is encoded after confirmation is received that the media segment was transferred to and stored at a remote station. See id.

Applicants assert that this claim is not obvious because all of the limitations of this claim are neither taught nor suggested by Nemirofsky alone or in combination with knowledge generally available to one of ordinary skill in the art. See MPEP § 2143.

There are at least two differences between Nemirofsky's teachings and Applicants' claim. These are: 1) Nemirofsky does not teach, as Applicants do, an encoder that encodes control signals related to a media segment after confirmation is received that the media segment was transferred to and stored at a remote station and 2) Nemirofsky does not teach, as Applicants do, an encoder that encodes a control signal related to a media segment or portion of a network-wide video program where the control signal does not have to immediately precede the media segment in a broadcast signal. Each of these differences is sufficient to show that Nemirofsky does not teach all the limitations of Applicants' claim 26. Therefore, since Nemirofsky does not teach all the limitations of Applicants' claim 26, claim 26 is not obvious.

Applicants' claim 26 is also not obvious since there is no suggestion to modify Nemirofsky's teachings to provide for an encoder that encodes a control signal after confirmation is received that the media segment has been transferred to and stored at a remote station, and encodes a control signal that does not have to immediately precede the related media segment in a broadcast signal since such a modification would change Nemirofsky's principle of operation. See MPEP § 2143.01. Nemirofsky specifically teaches encoding control data into market-specific segments and network-wide programs and having the control data precede the market-specific data to which it is assigned so the receiver can respond accordingly. See id., col. 3, ln. 28-38. Nemirofsky's principle of operation is to provide an encoder to encode control data immediately preceding the market-

specific segment or network-wide program segment sent to the receiving unit so that the receiving unit can react accordingly. Modifying Nemirofsky's approach to resemble Applicants' approach, i.e., first transmitting the market-specific segment to the receiving site, confirming the transfer, and then having an encoder encode a signal calling for the market-specific segment to be played, would completely alter Nemirofsky's principle of operation by changing how and when Nemirofsky's encoder encodes control signals into a broadcast signal, specifically, changing when market-specific segments should be sent, adding a new step by requiring the confirmation of the transfer of the market-specific segments to the receiving unit, and changing when control data signals should be encoded and where they should appear in the signal being sent to the receiving unit. Such an alteration would require substantial redesign or reconstruction of Nemirofsky's teachings and, as such, there is therefore no suggestion to modify Nemirofsky to produce the Applicant's claimed invention. See In re Ratti at 813; see MPEP § 2143.01. Applicants' claim 26 is therefore not obvious.

Applicants' claims 27-45 are dependent claims of independent claim 26. As shown above, claim 26 is not obvious. Therefore, the claim's dependent claims are also not obvious for at least the same reasons as stated above for claim 26.

Claims 46-62

Applicants' amended claim 46 claims a remote insertion control apparatus for frame accurate insertion of a media segment into a broadcast signal. See amended claim 46. Among the elements comprising the remote insertion control apparatus are a storage media for storing the media segment, a player for playing the stored media segment, and an insertion control unit for controlling the broadcast signal switch (which switches between received broadcast signals and the

media segments played by the player). See id. The insertion control unit has an input for receiving from a central broadcast station the video signal of a broadcast signal from which a control signal may be extracted; the control signal related to the media segment is received after confirming the media segment has been stored. See id. Claim 46 was rejected as obvious under § 103(a) as being unpatentable over Nemirofsky as well as Esch et al. See 2nd Office action at 3, 9. Applicants assert neither of these references, alone, in combination, or in combination with knowledge generally known to those skilled in the art, teaches all the limitations of Applicants' claim 46 and therefore the claim is not obvious.

Nemirofsky fails to teach all the elements of Applicants' claim 46, specifically, a remote insertion control unit that extracts a control signal related to a stored media segment from a broadcast signal, the control signal received after confirming the media segment has been stored. As noted above, Nemirofsky's market-specific segments are received along with control data preceding the market-specific segment in question. In contrast, Applicants teach a remote insertion control apparatus where the media segment is stored before the control signal indicating when the media segment is to be played is sent, let alone received. Since Nemirofsky does not teach or suggest this limitation of Applicants' claim, Applicants' claim is not obvious over Nemirofsky.

Esch et al. teaches an apparatus for customizing advertising for television. Control data signals (the customized material in an advertisement) and schedule data signals (which include scheduling data) are created at a central site in an advertising delivery network and a communications signal is created by formatting the content data signals and schedule data signals with the video signal of the underlying advertisement; the schedule data signals are added to the content data signals, and a communications signal which includes the content data signal and/or the video signal

is created. See Esch et al., col. 4, ln. 10-28; col. 5, ln. 21-62. The communications signals are transmitted from a central site to a remote site via a satellite coupling the central and remote sites. See id., col. 4, ln. 37-38. Cue signals are among the network signals sent by the satellite network to the remote sites; when the cue signals are received at the remote site, the scheduled, customized commercial is inserted into the local network. See id., col. 3, ln. 60-62; see id., cols. 4-5, ln. 66-2; see id., col. 8, ln. 35-48.

Esch et al. fails to teach all the elements of Applicants' amended claim 46. Unlike Applicants' claim 46, Esch et al. fails to teach or suggest: 1) an insertion control unit for receiving a control signal (comprising a cue signal that transfers information about media segments and an action signal that triggers an insertion of the media segment) from a central broadcast station; and 2) an insertion control unit for receiving a control signal where the control signal is received after confirming the media segment has been stored. Since Esch et al. fails to teach all the limitations of Applicants' claim 46, claim 46 is not obvious over Esch et al.

Applicants' claim 46 is also not obvious if either Nemirofsky or Esch et al. were modified to provide for a remote insertion control apparatus which can extract a control signal from a broadcast signal sent from a central broadcast station, where the control signal is received after confirming the media segment has been stored, since the required modifications would require substantial redesign or reconstruction of these references' teachings and therefore there would be no suggestion to modify either of these references. See MPEP § 2143.01. In order to modify Nemirofsky to resemble Applicants' approach, a market-specific segment would first have to be stored at the remote site, the storage of the market-specific segment confirmed, and then control data sent to the remote insertion control unit, which

would then extract the control data from the broadcast signal. This would completely alter Nemirofsky's approach, as discussed above, and would require a substantial redesign and reconstruction of Nemirofsky's teachings; in light of the required redesign and reconstruction, there is no suggestion to modify Nemirofsky's teachings to produce Applicants' claimed invention. See In re Ratti at 813; see MPEP § 2143.01. Esch et al. would also require a substantial redesign and reconstruction in order to produce Applicants' claimed invention, specifically, altering the system so that the control signal, comprising cue and action signals, is received from a central broadcast station (rather than receiving control data signals generated at a central site and cue signals sent by the satellite network) and a confirmation of storage of the media is sent to the central site before a control signal is sent to the remote site. Given the required redesign and reconstruction of Esch et al. that is required to produce Applicants' claim 46, there is no suggestion to modify Esch et al. to produce Applicants' claimed invention. See In re Ratti at 813; see MPEP § 2143.01.

Claims 47-62 are dependent claims of independent claim 46 and are also not obvious. Applicants have shown that independent claim 46 is not obvious over either Nemirofsky or Esch et al. Therefore, dependent claims 47-62 are also not obvious for at least the same reasons.

Claims 63-80

Applicants' amended claim 63 teaches a method for frame accurate insertion of a media segment into a broadcast signal being broadcast from a central source and received by a remote receiver. See amended claim 63. Control and information signals are encoded into a broadcast signal after confirmation is received that the media segment was transferred to and stored at the remote receiver. See id. Applicants assert Nemirofsky, Esch et al., and/or Martinez,

alone, in combination, or in combination with knowledge generally known to those skilled in the art, fail to teach all the limitations of Applicants' claim 63 and therefore the claim is not obvious.

Nemirofsky fails to teach all the elements of Applicants' claim 63. As discussed above, Nemirofsky does not teach encoding control signals into a broadcast signal after confirmation is received that the media segment was transferred to and stored at the remote receiver. Since Nemirofsky fails to teach or suggest all the limitations of Applicants' claim, claim 63 is not obvious under Nemirofsky.

Esch et al. also fails to teach the elements of Applicants' claim 63. Specifically, Esch et al. fails to teach encoding control signals comprising a cue signal and an action signal into a broadcast signal at a central source after confirmation is received that the media segment was transferred to and stored at the remote receiver and broadcasting the broadcasting signal from a central source. Esch et al. therefore fails to teach or suggest all the limitations of Applicants' claim and the claim is not obvious.

Esch et al. combined with Martinez also fails to teach the elements of claim 63. Martinez teaches a two-way data broadcast network where a subscriber may request information from a television station, which responds to the request and sends the requested information to be displayed on the subscriber's terminal/TV set. See Martinez, col. 2, ln. 28-68. Martinez does not teach how to insert a media segment into a broadcast signal. Martinez does teach using VBI for transmitting requested information to the subscriber. See id., col. 2, ln. 60-68. However, Martinez fails to teach other elements of Applicants' claimed invention, such as encoding control signals comprising a cue signal and an action signal into a broadcast signal at a central source after confirmation is received that the media segment was transferred to and stored at the remote receiver and

broadcasting the broadcasting signal from a central source. Esch et al. also fails to teach these limitations. Since neither Martinez nor Esch et al., alone or in combination, teaches the limitations of Applicant's claim 63, claim 63 is not obvious over Esch et al. in view of Martinez.

Applicants have also shown above that there is no suggestion to modify either of these references to produce Applicants' claimed invention. The modifications to both these references that would be required to produce Applicants' claimed invention would require a substantial redesign and reconstruction of the references' teachings. In light of these substantial modifications, there is no suggestion modify either of these references to produce the claimed invention. Therefore, the claim is not obvious.

Claims 64-80 are dependent claims of independent claim 63 and are also not obvious. Applicants have shown that independent claim 63 is not obvious over either Nemirofsky or Esch et al. Therefore, dependent claims 64-80 are also not obvious for at least the same reasons.

Conclusion

Applicants have amended claims 1, 26, 46, 63, and 76. Applicants have also responded to an objection and rejections raised in the previous Office action and have shown Applicants' claims comply with formal requirements and are not obvious. Applicants respectfully request a Notice of Allowance.

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signed: Sally Azevedo
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Respectfully submitted,



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